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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,516	12/20/2001	James M. Ulery	99RSS064	5899
7590	11/29/2004		EXAMINER	
Mindspeed Technologies A Conexant Business 4311 Jamboree Road Newport Beach, CA 92660			ROCHE, TRENTON J	
			ART UNIT	PAPER NUMBER
			2124	

DATE MAILED: 11/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/029,516	ULERY ET AL.	
	Examiner	Art Unit	
	Trent J Roche	2124	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 20 December 2001.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-10 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 20 December 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

1. This action is responsive to communications filed 20 December 2001.
2. Claims 1-10 have been examined.

Claim Objections

3. Claim 8 is objected to because of the following informalities: There is no claim identification number before what appears to be claim 8. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The use of the word "natural" in claim 7 renders the claim indefinite, as "natural" is highly ambiguous, thereby rendering the scope of the claim difficult to ascertain.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-3 and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,752,038 to Blake et al, hereafter referred to as Blake.

Per claim 1:

Blake discloses:

- a method for executing a computer program having source code on a target computer platform having a memory (Note Figures 1 and 3 and the corresponding sections of the disclosure)
- defining a plurality of program objects for the computer program (“code portions within a module...” in col. 3 line 58)
- placing a first plurality of directives in the source code to divide the computer program into the program objects, whereby an annotated computer program is produced (“the compiler program automatically inserts a call to the library routine into each code portion...” in col. 5 lines 18-20)
- processing the annotated computer program to generate a description for each of the program objects (“during execution of the instrumented executable module, execution data is gathered...” in col. 5 lines 43-44)
- allocating the program objects to fixed locations in the memory of the target computer platform (Note Figure 6, item 608 and the corresponding sections of the disclosure)
- porting the annotated computer program to the target computer platform (“The instrumented object modules and a library file containing the library routine are then input into the linker program to produce an instrumented executable module...” in col. 5 lines 34-36)

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- generating an executable image of the annotated computer program, wherein the executable image is configured for execution on the target computer platform (“The instrumented object modules and a library file containing the library routine are then input into the linker program to produce an instrumented executable module...the instrumented executable module is executed...” in col. 5 lines 34-42)
- executing the executable image on the target computer platform (“the instrumented executable module is executed...” in col. 5 lines 41-42)

substantially as claimed.

Per claim 2:

The rejection of claim 1 is incorporated, and further, Blake discloses the program objects comprising executable code, constant data, and volatile data as claimed (“‘module’ includes any program or library of routines capable of executing on a computer system” in col. 4 lines 1-3. The executable code would include constant and volatile data.)

Per claim 3:

The rejection of claim 1 is incorporated, and further, Blake discloses estimating a typical usage for each of the program objects as claimed (“the concurrency of usage...” in col. 4 line 7)

Per claim 5:

The rejection of claim 1 is incorporated, and further, Blake discloses binding each of the directives to an object management system of the target computer platform (“merges the multiple compiled

code portions and resolves any interconnecting references, such as calls to external code portions, and stores the resulting code in an executable module” in col. 4 lines 55-58)

Per claim 6:

The rejection of claim 1 is incorporated, and further, Blake discloses placing a second plurality of directives in the source code to indicate linkages between program objects as claimed (“The linker program places code portions into the instrumented executable module...” in col. 5 lines 37-38)

Per claim 7:

The rejection of claim 1 is incorporated, and further, Blake discloses identifying a plurality of natural application boundaries in the source code, and placing the first plurality of directives in the source code at the natural application boundaries as claimed (“the compiler program automatically inserts a call to the library routine into each code portion while compiling the source module...” in col. 5 lines 18-20. The compiler inherently identifies the boundaries between the code portions, since it inserts calls to the library routine into each code portion.)

Per claim 8:

The rejection of claim 1 is incorporated, and further, Blake discloses each of the program objects having a unique name (Note Figure 3, item 116. All of the modules inherently have a unique name.)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,752,038 to Blake et al, hereafter referred to as Blake, in view of U.S. Patent 6,115,809 to Mattson, Jr. et al, hereafter referred to as Mattson.

Per claim 4:

The rejection of claim 1 is incorporated, and further, Blake does not explicitly disclose designating each of the program objects as one of a static program object and an overlay program object. Mattson discloses in an analogous profile based optimizing system the ability to designate objects as static program objects and overlay program objects (Note Figure 3 and the corresponding sections of the disclosure. The blocks which are designated as dynamic, or overlay, are translated into the dynamic code cache, while objects designated as static are translated into the static code cache.). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the static and overlay (dynamic) designating abilities of Mattson with the system disclosed by Blake, as one could then maximize fallthroughs and minimize branches in the computer code, as stated in col. 8 lines 13-16 of Mattson.

10. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,752,038 to Blake et al, hereafter referred to as Blake, in view of U.S. Patent 6,634,023 to Komatsu et al, hereafter referred to as Komatsu.

Per claim 9:

Blake discloses:

- a computer program product embodied on a first computer for facilitating the execution of a computer program having source code on a computer having a memory (Note Figures 1 and 3 and the corresponding sections of the disclosure)
- a compiler code segment comprising computer readable program code configured to cause the first computer to perform the steps of defining a plurality of program objects for the computer program (“code portions within a module...” in col. 3 line 58)
- placing a first plurality of directives in the source code to divide the computer program into the program objects, whereby an annotated computer program is produced (“the compiler program automatically inserts a call to the library routine into each code portion...” in col. 5 lines 18-20)
- an extraction code segment comprising computer readable program code configured to cause the first computer to process the annotated computer program to generate a description for each of the program objects (“during execution of the instrumented executable module, execution data is gathered...” in col. 5 lines 43-44)
- an object allocation code segment comprising computer readable program code configured to cause the first computer to allocate the program objects to fixed locations in the memory of the computer (Note Figure 6, item 608 and the corresponding sections of the disclosure)
- a porting code segment comprising computer readable program code configured to cause the first computer to port the annotated computer program to the computer (“The instrumented object modules and a library file containing the library routine are then input

into the linker program to produce an instrumented executable module...” in col. 5 lines 34-36)

- a merging code segment comprising computer readable program code configured to cause the first computer to generate an executable image of the annotated computer program, wherein the executable image is configured for execution on the computer (“The instrumented object modules and a library file containing the library routine are then input into the linker program to produce an instrumented executable module...the instrumented executable module is executed...” in col. 5 lines 34-42)

substantially as claimed. Blake does not explicitly disclose a second computer. Komatsu discloses in an analogous instruction re-ordering system the compilation of code on a server computer, the executable code being for execution on a second computer as claimed (“In the server computer, Java source code is compiled...the result of this compilation is bytecode. This bytecode is transferred to client computer...” in col. 4 line 66 to col. 5 line 2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the server and client compilation techniques of Komatsu with the system disclosed by Blake, as this would allow instruction re-ordering and optimization in network computers or information household electric appliances which may have small-sized memories or no hard disk, as disclosed by Komatsu in col. 4 lines 61-65)

Per claim 10:

The rejection of claim 9 is incorporated, and further, Blake discloses estimating a typical usage for each of the program objects as claimed (Note the rejection regarding claim 3.)

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trent J Roche whose telephone number is (571)272-3733. The examiner can normally be reached on Monday - Friday, 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571)272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Trent J Roche
Examiner
Art Unit 2124

TJR



ANIL KHATRI
PRIMARY EXAMINER